



BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XA567

Taking and Importing Marine Mammals: Taking Marine Mammals Incidental to Navy Training Exercises in the Mariana Islands Range Complex

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of letter of authorization.

SUMMARY: In accordance with the Marine Mammal Protection Act (MMPA), as amended, and implementing regulations, notification is hereby given that NMFS has issued a Letter of Authorization (LOA) to take marine mammals, by harassment, incidental to the U.S. Navy's training exercises within the Navy's Mariana Islands Range Complex (MIRC) in the Pacific Ocean.

DATES: Effective from August 10, 2012, through August 3, 2015.

ADDRESSES: Electronic copies of the Navy's request for an LOA, the LOA, the Navy's 2012 marine mammal monitoring report and 2012 exercise report are available by writing to P. Michael Payne, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910, by telephoning the contact listed here (SEE FOR FURTHER INFORMATION CONTACT), or online at: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>.

Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Brian D. Hopper, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

Section 101(a)(5) of the MMPA (16 U.S.C. 1361 et seq.) directs the Secretary of Commerce to allow, upon request, the incidental, but not intentional taking of marine mammals by U.S. citizens who engage in a military readiness activity if certain findings are made and regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization may be granted for periods of 5 years or less if NMFS finds that the taking will have a negligible impact on the species or stock(s), and will not have an unmitigable adverse impact on the availability of the species or stock(s) for certain subsistence uses. In addition, NMFS must prescribe regulations that include permissible methods of taking and other means effecting the least practicable adverse impact on the species and its habitat, and on the availability of the species for subsistence uses, paying particular attention to rookeries, mating grounds, and areas of similar significance. The regulations also must include requirements pertaining to the monitoring and reporting of such taking.

Regulations governing the taking of marine mammals incidental to the U.S. Navy's training activities in the MIRC were published on August 3, 2010 (75 FR 45527), and remain in effect through August 3, 2015. They are codified at 50 CFR 218.100. These regulations include mitigation, monitoring, and reporting requirements for the incidental taking of marine mammals

by the Navy's range complex training exercises. For detailed information on these actions, please refer to the August 3, 2010 Federal Register notice and 50 CFR 218.100.

A final rule was issued on February 1, 2012 (77 FR 4917) to allow certain flexibilities concerning Navy training activities and allow for multi-year LOAs in 12 range complexes, including MIRC.

Summary of LOA Request

On March 15, 2012, NMFS received a LOA renewal application to take marine mammals incidental to training activities in the MIRC between August 12, 2012 and August 3, 2015. The LOA application included a request from the U.S. Navy for modifications from previous LOAs issued under the MIRC regulations. Specifically, the Navy requested that NMFS modify the LOA to include taking of marine mammals incidental to mine neutralization training using Time Delay Firing Devices (TDFDs) within the MIRC, along with revised mitigation measures, to ensure that effects to marine mammals resulting from these activities will not exceed what was originally analyzed in the Final Rule for this Range Complex (75 FR 45527). The potential effects of mine neutralization training on marine mammals were comprehensively analyzed in the final regulations for this Range Complex and mine neutralization training has been included in the specified activity in the associated 2010 and 2011 LOAs. However, the use of TDFD and the associated mitigation measures have not been previously contemplated, which is why NMFS believed it was appropriate to provide the proposed modifications to the LOA to the public for review. NMFS published a notice proposing to modify and renew the LOA on June 7, 2012 (77 FR 33718).

On March 4, 2011, three dolphins were suspected to be killed by the Navy's mine neutralization training event using TDFDs in its Silver Strand Training Complex (SSTC). In

short, a TDFD device begins a countdown to a detonation event that cannot be stopped, for example, with a 10-min TDFD, once the detonation has been initiated, 10 minutes pass before the detonation occurs and the event cannot be cancelled during that 10 minutes. Although a previous Federal Register notice (76 FR 68734; November 7, 2011) stated that using TDFDs is believed to have likely resulted in the death of five dolphins, further discussion with the Navy and reviewing of reports concerning the incident showed that there is no concrete evidence that more than three dolphins were killed. Following the March 4th event, the Navy initiated an evaluation of mine neutralization events occurring throughout Navy Range Complexes and realized that TDFDs were being used at the VACAPES, JAX, and CHPT Range Complexes. According to the Navy, less than 3% of all MINEX events would not use TDFD. As a result, the Navy subsequently suspended all underwater explosive detonations using TDFDs during training. While this suspension was in place, the Navy worked with NMFS to develop a more robust monitoring and mitigation plan to ensure that marine mammal mortality and injury would not occur during mine neutralization training activities using TDFDs. After the Navy and NMFS developed a monitoring and mitigation plan for mine neutralization activities using TDFDs, the LOAs for VACAPES, JAX, and CHPT Range Complexes were modified and issued to the Navy after public notice and comment (77 FR 2040, January 13, 2012). Because testing and training activities in the MIRC also include mine neutralization using TDFDs, NMFS engaged in a similar process for renewing the LOA for MIRC.

The Navy requested that the revised LOA remain valid until August 2015. A detailed description of the Navy's LOA request can be found on NMFS website:

<http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications>.

Description of the Need for Time Delay Firing Devices in MINEX Training

A detailed description of the overall operational mission concerning the use of TDFDs was provided in the Federal Register notice for the proposed LOA (77 FR 33718, June 7, 2012), and is not repeated here.

Comments and Responses

A notice of receipt and request for public comment on the application and proposed authorization was published on June 7, 2012 (77 FR 33718). During the 30-day public comment period, NMFS received comments from the Marine Mammal Commission (Commission) and one private citizen.

Comment 1: The Commission recommends that NMFS require the Navy model the proposed monitoring schemes to determine what portion of the associated buffer zone is being monitored at any given time and the probability that any of the cetacean species in the area and entering the various-sized buffer zones would be detected before getting too close to the detonation site.

Response: In the fall of 2011, the Navy funded the Center for Naval Analysis (CNA) to examine this issue. The Navy asked CNA to: (1) analyze the Navy's mitigation approach (estimate the probability of marine mammals getting within the explosive safety zone without detection) under various scenarios; (2) determine what mathematical methods would be appropriate for estimating the probability of marine mammals entering the various safety zones undetected; (3) use the mathematical methods determined above to assess the effectiveness of the Navy's mitigation measures at protecting marine mammals; and (4) determine the effects of various factors such as the size of the explosive charge, the footprint of the impact zones, the travel speeds of various marine mammals, and the location and number of Navy observers.

CNA validated that a geometric approach to the problem would help in assessing the study questions described above, and its final conclusions regarding the Navy's proposed TDFD mitigation measures were as follows:

- Explosive harm ranges for charge sizes under consideration are driven by the 13 psi-ms acoustic impulse metric, which corresponds to slight lung injury.
- Fuse delay and animal swim speeds strongly drive results regarding mitigation capability.
- Probability of detection of all animals (Pd): (1) for TDFD mitigation ranges out to 1,000 yards, Pd would be close to 100 percent for 2-boats and 5-minute delay for charge weights up to 20-lb net explosive weight; and (2) for TDFD mitigation ranges of 1,400 yards or greater, likely Pd would be greater than 95-99 percent for 3-boats and 10-minute delay for charge weights up to 20-lb net explosive weight.
- A three-boat effort would be sufficient to cover most cases.

In terms of how the CNA analysis relates to the MIRC training activities, please see Response to Comment 3.

Comment 2: The Commission recommends that NMFS require the Navy to measure empirically the propagation characteristics of the blast (i.e., impulse, peak, pressure, and sound exposure level) from the 5- and 10-lb charges used in the proposed exercises and use that information to establish appropriately sized exclusion and buffer zones.

Response: In 2002, the Navy conducted empirical measurements of underwater detonations at San Clemente Island and at the SSTC in California. During these tests, 2 lb and 15 lb net explosive weight charges were placed at 6 and 15 feet of water and peak pressures and energies were measured for both bottom placed detonations and detonations off the bottom. A

finding was that, generally, single-charge underwater detonations, empirically measured, were similar to or less than propagation model predictions (DoN 2006).

To date, mine neutralization training exercises have not been conducted in the MIRC. However, on the east coast, the Navy has conducted marine mammal surveys during mine neutralization training events during August of 2009, 2010, and 2011 as part of its marine mammal monitoring program (see Navy's VACAPES, JAX, and CHPT annual monitoring reports for further details). NMFS contacted Navy regarding the feasibility of empirical sound propagation measurement in the east coast range complexes. The Navy stated that it will explore the value of adding field measurements during monitoring of a future mine neutralization event after evaluating the environmental variables affecting sound propagation in the area, such as shallow depths, seasonal temperature variation, bottom sediment composition, and other factors that would affect our confidence in the data collected. If such data can be collected without unreasonable costs and impacts to training, the Navy will move forward in incorporating the measurements into its monitoring program for east coast mine neutralization training.

At this moment, because the modeled exclusion zones are set to be much larger than the measured and modeled zones of injury or TTS, NMFS does not believe that there is added value to conducting empirical measurements before the issuance of the modified LOAs, especially given the short time frame during which the LOA modifications will be effective. Nevertheless, NMFS would recommend the Navy conduct these measurements as funding becomes available.

Comment 3: The Commission recommends that NMFS require the Navy to re-estimate the sizes of the buffer zones using the average swim speed of the fastest-swimming marine mammal that occurs in the areas within the Complex where time-delay firing devices would be used and for which taking authorization has been granted.

Response: NMFS does not agree with the Commission's assessment that the sizes of the buffer zones be established based on average swim speed of the fastest swimming marine mammals. Just because an animal can go faster does not mean that it will, and the behavioral context of the fast swim speeds should be considered. Maximum speeds are energetically expensive for any organism and usually not maintained for long. Unpublished observations of marine mammals within the MIRC during the Navy 2011 surveys have documented mostly groups of slow moving, milling spinner dolphins, bottlenose dolphins, and short-finned pilot whales. The occurrence of more pelagic species (Risso's dolphins and short-beaked common dolphins) is predicted to be less likely and limited in duration. These species are included in the MIRC LOA as a conservative measure.

Further expansion of the buffer zones is not warranted because: (1) the current buffer zones already incorporate an additional precautionary factor to account for swim speeds above 3 knots; and (2) buffer zones greater than 1,000 yards for events using 2 boats, and 1,400 yards or greater for events using 3 boats or 2 boats and 1 helicopter, cannot be monitored or supported by the Navy's exercising units.

In terms of sizes of the mitigation zones, a 1,400 yard radius or greater for larger charge or longer time TDFD training events are required, which is the maximum distance the Navy can confidently clear with 3 boats (or 2 boats and 1 helicopter). NMFS is satisfied that the mitigation zones proposed in the Federal Register notice for the proposed IHA (77 FR 33718, June 7, 2012) are justified, adequate, and protective of marine mammals. In addition to the buffer zone determination issue, there are also additional operational and training resources to consider. While larger mitigation zones increase distance from the detonation site, there must also be an ability to adequately survey a mitigation zone to ensure animals are spotted. Due to the type of

small unit training being conducted at the MIRC, there are limited surveillance assets available to monitor a given buffer zone during underwater detonations training. Scheduling additional observation boats and crews beyond what the Navy has proposed in the MIRC LOA application involves coordination and availability of other unit(s) and will degrade overall training readiness. For instance, limited availability of boats and personnel do not allow for operation of 4 or more boats. If 4 boats were required, negative impacts to military readiness would result because Navy would be precluded from conducting events due to unavailable assets. Therefore, both NMFS and the Navy do not consider additional observation boats other than those designated a valid option during TDFD training events in the MIRC.

Comment 4: One private citizen expressed general opposition to Navy activities and NMFS' issuance of a modified LOA because of the danger of killing marine life.

Response: NMFS appreciates the commenter's concern for the marine mammals that live in the area of the proposed activity. However, the MMPA allows individuals to take marine mammals incidental to specified activities if NMFS can make the necessary findings required by law (i.e., negligible impact, unmitigable adverse impact on subsistence users, etc.), as explained in the rulemakings (75 FR 45527, August 3, 2010) and the proposed LOA (77 FR 33718, June 7, 2012). The detailed analyses in these documents show that no marine mammal mortality would likely occur as a result of the Navy activities, including the use of TDFDs during mine neutralization trainings. Finally, take of marine mammals by mortality and serious injury are not authorized under these rules and regulations. Therefore, NMFS has made the necessary findings under 16 U.S.C. 1371 (a)(5)(A) to support our issuance of this LOA.

Modifications to Mitigation and Monitoring Measures Related to Mine Neutralizing Training

NMFS worked with the Navy and developed a series of modifications to improve monitoring and mitigation measures so that take of marine mammals will be minimized and no risk of injury and/or mortality to marine mammals would result from the Navy's use of TDFD mine neutralization training exercises. The following modifications to the mitigation and monitoring measures are specific to MCM training exercises involving TDFDs conducted within the MIRC.

(A) Visual Observation and Exclusion Zone Monitoring

The estimated potential for marine mammals to be exposed during demolitions and mine countermeasure training events is not expected to change with the use of TDFDs, as the same amount of explosives will be used and the same area ensounded/pressurized regardless of whether TDFDs are involved. This is due to the fact that estimated exposures are based on the probability of the animals occurring in the area when a training event is occurring, and this probability does not change because of a time-delay. However, what does change is the potential effectiveness of the current mitigation that is implemented to reduce the risk of exposure.

The locations selected for mine neutralization training within the MIRC are all close to shore (~3 – 12 nm) and in shallow water (~ 10 – 20 m). Based on the training location, description of the area, and data from recent monitoring surveys, large whales and species that prefer deep or offshore waters are not expected to occur in this area with any regularity. However, mitigation measures apply to all species and will be implemented if any marine mammal species is sighted.

The rationale used to develop new monitoring zones to reduce potential impacts to marine mammals when using a TDFD is as follows: The Navy has identified the distances at which the sound and pressure attenuate below NMFS injury criteria (i.e., outside of that distance

from the explosion, marine mammals are not expected to be injured). Here, the Navy identifies the distance that a marine mammal is likely to travel during the time associated with the TDFD's time delay, and that distance is added to the injury distance. If this enlarged area is effectively monitored, animals would be detected at distances far enough to ensure that they could not swim to the injurious zone within the time of the TDFD. Using an average swim speed of 3 knots (102 yd/min) for a delphinid, the Navy provided the approximate distance that an animal would typically travel within a given time-delay period (Table 1). Based on acoustic propagation modeling conducted as part of the NEPA analyses for this Range Complex, there is potential for injury to a marine mammal within 106 yd of a 5-lb detonation and within 163 yd of a 10-lb detonation. The buffer zones were calculated based on average swim speed of 3 knots (102 yd/min). The specific buffer zones based on charge size and the length of time delays are presented in Table 2.

Table 1. Potential Distance Based on Swim speed and Length of Time-Delay

Species Group	Swim Speed	Time-delay	Potential Distance Traveled
Delphinid	102 yd/min	5 min	510 yd
		6 min	612 yd
		7 min	714 yd
		8 min	816 yd
		9 min	918 yd
		10 min	1,020 yd

Table 2. Buffer Zone Radius (yd) for TDFDs Based on Size of Charge and Length of Time-Delay

		Time-delay					
		5 min	6 min	7min	8 min	9 min	10 min
Charge Size	5-lb	616 yd	718 yd	820 yd	922 yd	1,024 yd	1,126 yd
	10-lb	673 yd	775 yd	877 yd	979 yd	1,081 yd	1,183 yd

However, it is possible that some animals may travel faster than the average swim speed noted above, thus there may be a possibility that these faster swimming animals would enter the buffer zone during time-delayed to detonation. In order to compensate for the swim distance potentially covered by faster swimming marine mammals, an additional correction factor was

applied to increase the size of the buffer zones radii. Specifically, two sizes of buffer zones are established for the ease of monitoring operations based on size of charge (e.g., 5-lb and 10-lb) and length of time-delay, with an additional buffer added to account for faster swim speed. These revised buffer zones are shown in Table 3. As long as animals are not observed within the buffer zones before the time-delay detonation is set, then the animals would be unlikely to swim into the injury zone from outside the area within the time-delay window.

Table 3. Updated Buffer Zone Radius (yd) for TDFDs Based on Size of Charge and Length of Time-Delay, with Additional Buffer Added to Account for Faster Swim Speeds

		Time-delay					
		5 min	6 min	7min	8 min	9 min	10 min
Charge Size	5-lb	1,000 yd	1,000 yd	1,000 yd	1,000 yd	1,400 yd	1,400 yd
	10-lb	1,000 yd	1,000 yd	1,000 yd	1,400 yd	1,400 yd	1,400 yd

1,000 yds: minimum of 2 observation boats

1,400/1,450 yds: minimum of 3 observation boats or 2 boats and 1 helicopter

The current mitigation measure specifies that parallel tracklines will be surveyed at equal distances apart to cover the buffer zone. Considering that the buffer zone for protection of a delphinid may be larger than specified in the current mitigation, a more effective and practicable method for surveying the buffer zone is for the survey boats to position themselves near the mid-point of the buffer zone radius (but always outside the detonation plume radius/human safety zone) and travel in a circular pattern around the detonation location surveying both the inner (toward detonation site) and outer (away from detonation site) areas of the buffer zone, with one observer looking inward toward the detonation site and the other observer looking outward. When using 2 boats, each boat will be positioned on opposite sides of the detonation location, separated by 180 degrees. When using more than 2 boats, each boat will be positioned equidistant from one another (120 degrees separation for 3 boats, 90 degrees separation for 4 boats, etc.). Helicopters will travel in a circular pattern around the detonation location when used.

During mine neutralization exercises involving surface detonations, a helicopter deploys personnel into the water to neutralize the simulated mine. The helicopter will be used to search for any marine mammals within the buffer zone. Use of additional Navy aircraft beyond those participating in the exercise was evaluated. Due to the limited availability of Navy aircraft and logistical constraints, the use of additional Navy aircraft beyond those participating directly in the exercise was deemed impracticable. A primary logistical constraint includes coordinating the timing of the detonation with the availability of the aircraft at the exercise location. Exercises typically last most of the day and would require an aircraft to be dedicated to the event for the entire day to ensure proper survey of the buffer zone 30 minutes prior to and after the detonation. The timing of the detonation may often shift throughout the day due to training tempo and other factors, further complicating coordination with the aircraft.

Based on the above reasoning, the modified monitoring and mitigation for visual observation are as follows:

A buffer zone around the detonation site will be established to survey for marine mammals. Events using positive detonation control will use a 700 yd radius buffer zone. Events using time-delay firing devices will use the table below to determine the radius of the buffer zone. Time-delays longer than 10 minutes will not be used. Buffer zones less than 1,400 yds shall use a minimum of 2 boats to survey for marine mammals. Buffer zones greater than 1,400 yds radius shall use 3 boats or 1 helicopter and 2 boats to conduct surveys for marine mammals. Two dedicated observers in each of the boats will conduct continuous visual survey of the buffer zone for marine mammals for the entire duration of the training event. The buffer zone will be surveyed from 30 minutes prior to the detonation and for 30 minutes after the detonation. Other personnel besides the observers can also maintain situational awareness on the presence of

marine mammals and sea turtles within the buffer zone to the best extent practical given dive safety considerations. If available, aerial visual survey support from Navy helicopters can be utilized, so long as it does not jeopardize safety of flight.

When conducting the survey, boats will position themselves at the mid-point of the buffer zone radius (but always outside the detonation plume radius/human safety zone) and travel in a circular pattern around the detonation location surveying both the inner (toward detonation site) and outer (away from detonation site) areas of the buffer zone. To the extent practicable, boats will travel at 10 knots to ensure adequate coverage of the buffer zone. When using 2 boats in a less than 1,400 yds buffer zone, each boat will be positioned on opposite sides of the detonation location at 500 yds from the detonation point, separated by 180 degrees. When using 3 boats in a 1,400 yds or greater buffer zone, each boat will be positioned equidistant from one another (120 degrees separation) at 700 yds respectively from the detonation point. Helicopter pilots will use established Navy protocols to determine the appropriate pattern (e.g., altitude, speed, flight path, etc.) to search and clear the buffer zone of turtles and marine mammals.

(B) Mine neutralization training shall be conducted during daylight hours only.

(C) Maintaining Buffer Zone for 30 Minutes Prior to Detonation and Suspension of Detonation

Visually observing the mitigation buffer zone for 30 min prior to the detonation allows for any animals that may have been submerged in the area to surface and therefore be observed so that mitigation can be implemented. Based on average dive times for the species groups that are most likely expected to occur in the areas where mine neutralization training events take place, (i.e., delphinids), 30 minutes is an adequate time period to allow for submerged animals to

surface. Allowing a marine mammal to leave of their own volition if sighted in the mitigation buffer zone is necessary to avoid harassment of the animal.

It is not possible to suspend the detonation after a TDFD is initiated due to safety risks to personnel. Therefore, the current measure that requires suspension of the detonation cannot be implemented when using a TDFD and should be removed, noting that revised mitigation measures will make it unnecessary to have to suspend detonation within the maximum of ten minutes between setting the TDFD and detonation.

Based on the above reasoning, the modified monitoring and mitigation for pre-detonation observation are as follows:

If a marine mammal is sighted within the buffer zone, the animal will be allowed to leave of its own volition. The Navy will suspend detonation exercises and ensure the area is clear for a full 30 minutes prior to detonation.

When required to meet training criteria, time-delay firing devices with up to a 10 minute delay may be used. The initiation of the device will not start until the area is clear for a full 30 minutes prior to initiation of the timer.

(D) The requirement in the current LOA that “no detonation shall be conducted using time-delayed devices” is deleted because the improved monitoring and mitigation measures will minimize the potential impacts to marine mammals and greatly reduce the likelihood of injury and/or mortality to marine mammals using TDFDs.

The availability of additional technological solutions that would enable suspension of the detonation when using a TDFD was evaluated. Currently there are no devices that would stop the timer if a marine mammal was sighted within the buffer zone after initiation of the timer.

The Navy states that procurement of new technology can take many years to be fielded. Joint service procurement can take approximately 3 years, with an additional 6 months when an item needs to go through the WSESRB (Weapon System Explosive Safety Review Board). For example, the Acoustic Firing System (AFS) has been in development for 10 years. It was fielded “as is” to the Fleet in 2011, with the understanding that it has not met the minimum standards put forth. Once fielded, it will remain in the Product Improvement Process (PIP), which can take up to five years to have a finished product. This AFS will not be considered a true positive control firing device because current technology prevents a shorter time-delay than one minute in the firing cycle.

In 2012 another Radio Firing Device (RFD) will be fielded to the Fleet through a new program called the Special Mission Support Program. This RFD has a disposable receiver that can function in an Electronic Counter Measure (ECM) environment. Navy will evaluate and consider the use of the AFS and the new RFD for potential use as mitigation once they are fielded, but currently they are not options that can be implemented. Without further evaluation, it is not clear whether the new RFD could be used to replace TDFD at this moment.

(E) Diver and Support Vessel Surveys

The Navy recommends, and NMFS concurs, revising this measure to clarify that it applies to divers only. The intent of the measure is for divers to observe the immediate, underwater area around the detonation site for marine mammals while placing the charge.

The modified mitigation measure is provided below:

Divers placing the charges on mines will observe the immediate, underwater area around the detonation site for marine mammals and will report any sightings to the surface observers.

(F) Personnel shall record any protected species observations during the exercise as well as measures taken if species are detected within the zone of influence (ZOI).

Take Estimates

There is no change for marine mammal take estimates from what were analyzed in the final rule (75 FR 45527, August 3, 2010) for mine neutralization training activities in this Range Complex. Take estimates were based on marine mammal densities and distribution data in the action area, computed with modeled explosive sources and the sizes of the buffer zones.

The Comprehensive Acoustic System Simulation/Gaussian Ray Bundle (OAML, 2002) model, modified to account for impulse response, shock-wave waveform, and nonlinear shock-wave effects, was run for acoustic-environmental conditions derived from the Oceanographic and Atmospheric Master Library (OAML) standard databases. The explosive source was modeled with standard similitude formulas, as in the Churchill FEIS – an analysis of a Navy ship-shock trial that initially developed the criteria for mortality, Level A harassment, and Level B harassment from explosive detonations. Because all the sites are shallow (less than 50 m), propagation model runs were made for bathymetry in the range from 10 m to 40 m.

Estimated zones of influence (ZOIs; defined as area within which the animals would experience Level B harassment) varied with the explosive weights, however, little seasonal dependence was found in MIRC. Generally, in the case of ranges determined from energy metrics, as the depth of water increases, the range shortens. The single explosion TTS-energy criterion ($182 \text{ dB re } 1 \text{ microPa}^2\text{-sec}$) was dominant over the pressure criteria and therefore used to determine the ZOIs for the Level B exposure analysis.

The total ZOI, when multiplied by the animal densities and total number of events, provides the exposure estimates for that animal species for each specified charge in the MIRC

(Table 4). Take numbers were estimated without considering marine mammal monitoring and mitigation measures, therefore, the additional monitoring and mitigation measures and the use of TDFD for mine neutralization training would not change the estimated takes from the original final rule for MIRC (75 FR 45527, August 3, 2010).

Table 4. Estimated Takes of Marine Mammals that Could Result from MCM Training

Species	Potential Exposures @ 182 dB re 1 μPa²-s or 23 psi	Potential Exposures @ 205 dB re 1 μPa²- s or 13 psi	Potential Exposures @ 30.5 psi
Cuvier's beaked whale	2	0	0
Dwarf/Pygmy sperm whale	2	0	0
Fraser's dolphin	2	0	0
Melon-headed whale	2	0	0
Pantropical spotted dolphin	2	0	0
Risso's dolphin	4	0	0

Analysis and Negligible Impact Determination

Pursuant to NMFS' regulations implementing the MMPA, an applicant is required to estimate the number of animals that will be "taken" by the specified activities (i.e., takes by harassment only, or takes by harassment, injury, and/or death). This estimate informs the analysis that NMFS must perform to determine whether the activity will have a "negligible impact" on the species or stock. Level B (behavioral) harassment occurs at the level of the individual(s) and does not assume any resulting population-level consequences, though there are known avenues through which behavioral disturbance of individuals can result in population-level effects. A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through behavioral harassment, NMFS must consider other factors, such as the

likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, migration, etc.), or any of the other variables mentioned in the first paragraph (if known), as well as the number and nature of estimated Level A takes, the number of estimated mortalities, and effects on habitat.

The aforementioned additional mitigation and monitoring measures will increase the buffer zone to account for marine mammal movement and increase marine mammal visual monitoring efforts to ensure that no marine mammal would be in a zone where injury and/or mortality could occur as a result of time-delayed detonation.

In addition, the estimated exposures are based on the probability of the animals occurring in the area when a training event is occurring, and this probability does not change based on the use of TDFDs or implementation of mitigation measures (i.e., the exposure model does not account for how the charge is initiated and assumes no mitigation is being implemented). Therefore, the potential effects to marine mammal species and stocks as a result of mine neutralization training activities are the same as those analyzed in the final rule governing the incidental takes for this activity. Consequently, NMFS believes that the existing analysis in the final rule does not change as a result of issuing an LOA that includes mine neutralization training activities using TDFDs.

Further, there will be no increase of marine mammal takes as analyzed in the previous rule governing NMFS-issued incidental takes that could result from the Navy's training activities within this Range Complex by using TDFDs.

Based on the analyses of the potential impacts from the mine countermeasure training exercises conducted within the MIRC, especially the improved marine mammal monitoring and mitigation measures, NMFS has determined that the modification of the Navy's current LOA to

include taking of marine mammals incidental to mine neutralization training using TDFD within the MIRC will have a negligible impact on the marine mammal species and stocks present in these action areas, provided that additional mitigation and monitoring measures are implemented.

ESA

There are five marine mammal species that are listed as endangered under the ESA with confirmed or possible occurrence in the MIRC: humpback whale, blue whale, fin whale, sei whale, and sperm whale.

Pursuant to Section 7 of the ESA, NMFS has completed consultation internally on the issuance of the modified LOAs under section 101(a)(5)(A) of the MMPA for these activities. The Biological Opinion concludes that the Navy's training activities using TDFDs within the MIRC Study Area are likely to adversely affect, but are not likely to jeopardize the continued existence of these ESA-listed marine mammal species under NMFS jurisdiction.

National Environmental Policy Act (NEPA)

NMFS participated as a cooperating agency on the Navy's Final Environmental Impact Statements (FEISs) for the MIRC. NMFS subsequently adopted the Navy's EISs for the purpose of complying with the MMPA. For issuance of the LOA, which includes TDFDs, but also specifically adds monitoring and mitigation measures to minimize the likelihood of any additional impacts from TDFDs, NMFS has determined that there are no changes in the potential effects to marine mammal species and stocks as a result of the mine neutralization training activities using TDFDs. Therefore, no additional NEPA analysis was required, and the information in the existing EISs remains sufficient.

Determination

Based on the preceding analysis of the likely effects of the specified activity on marine mammals and their habitat and dependent upon the implementation of the mitigation measures, NMFS determined that the total taking from Navy mine neutralization training exercises utilizing TDFDs in the MIRC will have a negligible impact on the affected marine mammal species or stocks. NMFS has issued the modified LOA to allow takes of marine mammals incidental to the Navy's mine neutralization training exercises using TDFDs, provided that the improvements to the monitoring and mitigation measures are implemented.

Dated: July 31, 2012.

Helen M. Golde,
Acting Director,
Office of Protected Resources,
National Marine Fisheries Service.

[FR Doc. 2012-19160 Filed 08/03/2012 at 8:45 am; Publication Date: 08/06/2012]